

What is claimed is:

1. A re-keyable lock comprising:

a cylinder rotatably supported in a housing between a locked position and an unlocked position, said cylinder having a longitudinal slot and a transverse channel;

a locking mechanism including a wafer tumbler resiliently supported in said transverse channel and positionable therein between an engaged position wherein said wafer tumbler engages said housing and a disengaged position wherein said wafer tumbler disengages said housing, said wafer tumbler including a base element having an opening formed therethrough which is at least partially aligned with said longitudinal slot, a rider element positionable within said transverse channel relative to said base element and a coupling element positionable between a first position wherein said base element is coupled to said rider element and a second position wherein said base element is uncoupled from said rider element; and

a re-keying mechanism operable when said cylinder is in said unlocked position to move said coupling element from said first position to said second position for repositioning said rider element relative to said base element such that the lock is re-keyed.

2. The lock of claim 1, wherein said coupling element comprises a flexible element biased to couple said base element and said rider element,

said flexible element being deflectable to uncouple said base element and said rider element.

3. The lock of claim 2, wherein said rider element selectively engages a plurality of engagement formations in said base element, each of said plurality of engagement formations corresponding to a biting size.

4. The lock of claim 3, wherein each of said plurality of engagement formations comprise a tab.

5. The lock of claim 3, wherein each of said plurality of engagement formations comprise a slot.

6. The lock of claim 2, wherein said re-keying mechanism comprises a re-keying tool insertable into a re-keying slot formed in said cylinder to deflect said flexible element.

7. The lock of claim 6, wherein said re-keying slot is T-shaped.

8. The lock of claim 6, wherein said re-keying tool is tapered.

9. The lock of claim 1, wherein said base element comprises a first body portion and a pair of legs extending therefrom, said pair of legs being received in a U-shaped portion of said transverse channel.

10. The lock of claim 9 further comprising a pair of springs disposed in said U-shaped portion of said transverse channel and engaging said pair of legs to bias said locking mechanism into said engaged position.

11. The lock of claim 9, wherein said rider element comprises a pair of arms extending from a second body portion, said pair of arms capturing said first body portion therebetween.

12. The lock of claim 1, wherein said locking mechanism further comprises a plurality of wafer tumblers, each of said plurality of wafer tumblers resiliently supported in one of a plurality of transverse channels formed in said cylinder.

13. A re-keyable lock comprising: ✓

a cylinder rotatably supported in a housing between a locked position and an unlocked position, said cylinder having a longitudinal slot, a first set of transverse channels and a second set of transverse channels opposingly interlaced with said first set of transverse channels;

a locking mechanism including:

a first set of wafer tumblers resiliently supported in said first set of transverse channels and positionable therein between an engaged position wherein said first set of wafer tumblers engage said housing and a disengaged position wherein said first set of wafer tumblers disengage said housing; and

a set of second wafer tumblers resiliently supported in said second set of transverse channels and positionable therein between an engaged position wherein said second set of wafer tumblers engage said housing and a disengaged position wherein said second set of wafer tumblers disengage said housing;

each wafer tumbler of said first and second sets of wafer tumblers including a base element having an opening formed therethrough which is at least partially aligned with said longitudinal slot, a rider element positionable within said transverse channel relative to said base element and a coupling element positionable between a first position wherein said base element is coupled to said rider element and a second position wherein said base element is uncoupled from said rider element; and

a re-keying mechanism operable when said cylinder is in said unlocked position to move said coupling element from said first position to said second position for repositioning said rider element relative to said base element such that the lock is re-keyed.

14. The lock of claim 13, wherein said coupling element comprises a flexible element biased to couple said base element and said rider element, said flexible element being deflectable to uncouple said base element and said rider element.

15. The lock of claim 14, wherein said rider element selectively engages a plurality of engagement formations in said base element, each of said plurality of engagement formations corresponding to a biting size.

16. The lock of claim 15, wherein each of said plurality of engagement formations comprise a tab.

17. The lock of claim 15, wherein each of said plurality of engagement formations comprise a slot.

18. The lock of claim 14, wherein said re-keying mechanism comprises a re-keying tool insertable into a re-keying slot formed in said cylinder to deflect said flexible element.

19. The lock of claim 18, wherein said re-keying slot is T-shaped.
20. The lock of claim 18, wherein said re-keying tool is tapered.
21. The lock of claim 13, wherein said base element comprises a first body portion and a pair of legs extending therefrom, said pair of legs being received in a U-shaped portion of said transverse channel.
22. The lock of claim 21 further comprising a pair of springs disposed in said U-shaped portion of said transverse channel and engaging said pair of legs to bias said locking mechanism into said engaged position.
23. The lock of claim 21, wherein said rider element comprises a pair of arms extending from a second body portion, said pair of arms capturing said first body portion therebetween.

24. A re-keyable lock comprising:
- a cylinder rotatably supported in a housing³, said cylinder having a longitudinal slot and a plurality of transverse channels;
- a locking mechanism positionable between an unlocked position and a locked position, said locking mechanism including a plurality of wafer tumblers resiliently supported in a corresponding one of said plurality of transverse channels, each of said plurality of wafer tumblers including a rider element selectively engagable with a base element in a first engagement position corresponding to a first key and a second engagement position corresponding to a second key; and
- a re-keying mechanism operable when said locking mechanism is in said unlocked position to disengage each rider element from each base element in said first engagement position and engage each rider element to each base element in said second engagement position.

25. The lock of claim 24, wherein each of said plurality of wafer tumblers includes a first set of wafer tumblers opposingly interlaced with a second set of wafer tumblers.

26. The lock of claim 25, wherein said re-keying mechanism includes a first re-keying element associated with said first set of wafer tumblers and a second re-keying element associated with said second set of wafer tumblers.

27. A method for in-situ re-keying of a lock, the method comprising:

- inserting a first key into a lock cylinder;
- rotating said lock cylinder relative to a housing with said first key to put the lock into a learn position;
- uncoupling a first element of a wafer tumbler from a second element of said wafer tumbler;
- replacing said first key with a second key such that said first element is re-positioned relative to said second element;
- coupling said first element to said second element of said wafer tumbler;
- rotating said lock cylinder to a locked position with said second key;
- and
- removing said second key.

28. The method of claim 27, wherein coupling includes biasing a flexible element interposed between said first element and said second element to couple said first element to said second element.

29. The method of claim 28, wherein uncoupling includes deflecting said flexible element to uncouple said first element from said second element.

30. The method of claim 29, wherein uncoupling includes inserting a re-keying tool in a re-keying slot of said cylinder to deflect said flexible element.

31. The method of claim 30, wherein coupling includes removing said re-keying tool from said re-keying slot.